

AMENDED IN ASSEMBLY AUGUST 31, 2009

AMENDED IN ASSEMBLY JULY 15, 2009

AMENDED IN SENATE MAY 28, 2009

AMENDED IN SENATE MAY 6, 2009

AMENDED IN SENATE APRIL 22, 2009

AMENDED IN SENATE APRIL 2, 2009

SENATE BILL

No. 471

**Introduced by Senators Romero and Steinberg
(Coauthors: Senators Alquist and Padilla)**

(Coauthors: Assembly Members Ammiano, Brownley, Carter, Eng,
Hill, Solorio, and Torlakson)

February 26, 2009

An act to add Article 13 (commencing with Section 33475) to Chapter 3 of Part 20 of Division 2 of Title 2 of the Education Code, relating to education.

LEGISLATIVE COUNSEL'S DIGEST

SB 471, as amended, Romero. California Stem Cell and Biotechnology Education and Workforce Development Act *of 2009*.

The California Stem Cell Research and Cures Act, an initiative measure approved by the voters at the November 2, 2004, general election (Proposition 71), establishes the California Institute for Regenerative Medicine (CIRM), the purpose of which is, among other things, to make grants and loans for stem cell research, for research facilities, and for other vital research opportunities to realize therapies,

protocols, and medical procedures that will result in the cure for, or substantial mitigation of, diseases and injuries.

This bill would create the California Stem Cell and Biotechnology Education and Workforce Development Act of 2009 to establish stem cell and biotechnology education and workforce development as a state priority and to promote stronger links among industry sectors, the CIRM, and California public schools. ~~This bill would require the State Department of Education, in consultation with the CIRM and representatives of the biotechnology industry, to promote stem cell and biotechnology education and workforce development in the department's existing programs, as specified.~~

~~The bill would also require the State Board of Education to incorporate stem cell science curriculum content into the science curriculum framework, evaluation criteria, and instructional materials at its next revision and adoption. The bill would request that the Regents of the University of California consult with the CIRM and representatives of the biotechnology industry in developing curriculum for the California State Summer School for Mathematics and Science Department of Education to post certain information on its Internet Web site, including the CIRM model curriculum on stem cell science, and to communicate to science teachers and school districts the availability of this curriculum.~~

Vote: majority. Appropriation: no. Fiscal committee: yes.
State-mandated local program: no.

The people of the State of California do enact as follows:

- 1 SECTION 1. The Legislature finds and declares all of the
- 2 following:
- 3 (a) If California is to retain its premier position in stem cell
- 4 research and fully realize the medical and economic benefits of
- 5 regenerative medicine, stronger links are needed between California
- 6 public schools and this emerging industry.
- 7 (b) At the November 2004 statewide general election, California
- 8 voters approved Proposition 71, the California Stem Cell Research
- 9 and Cures Initiative, which authorizes \$3 billion in state bond
- 10 funding for stem cell research at California universities and
- 11 research institutions and added Article XXXV to the California
- 12 Constitution and Sections 125290.10 et seq. to the Health and
- 13 Safety Code.

1 (c) Proposition 71 established a new state agency, the California
2 Institute for Regenerative Medicine (CIRM), to make grants and
3 provide loans for stem cell research and research facilities.

4 (d) The ballot pamphlet information and findings and
5 declarations of Proposition 71 described how stem cell research
6 will lead to the development of life-saving regenerative treatments
7 and cures for a variety of incurable diseases, including cancer,
8 diabetes, heart disease, Alzheimer's disease, Parkinson's disease,
9 spinal cord injuries, multiple sclerosis, and Huntington's disease;
10 and also benefit the California economy by creating projects, jobs,
11 and therapies that will generate millions of dollars in new tax
12 revenues in our state and advance the biotech industry in California
13 to world leadership as an economic engine for California's future.

14 (e) The public funding of stem cell research, combined with
15 significant private donations, has made California the national
16 leader in stem cell research.

17 (f) After President Bush limited federal funding for embryonic
18 stem cell research in 2001, most states eliminated or significantly
19 reduced stem cell research.

20 (g) On March 9, 2009, President Obama issued an executive
21 order lifting restrictions on federal funding for stem cell research,
22 leading other states to move quickly to try to catch up to California.

23 (h) Several recent reports have predicted that California will
24 soon face a dramatic shortage of trained professionals to fill jobs
25 in the life sciences sector and a more widespread shortage of
26 college educated and technically trained workers to meet industry
27 demands.

28 (i) California's growing gap between supply and demand for
29 college-educated and technically trained workers is exacerbated
30 by an alarming high school dropout rate.

31 (j) Education must be the cornerstone of California's economic
32 development strategy, and education that is closely linked to the
33 needs of emerging industries is critical.

34 ~~(k) The CIRM, in recognition that translating stem cell research~~
35 ~~into therapies and cures will require an expanding pool of~~
36 ~~individuals with specialized training and skills, has made Bridges~~
37 ~~to Stem Cell Research grants to fund research and training activities~~
38 ~~for postsecondary students interested in careers in regenerative~~
39 ~~medicine.~~

~~(l) The CIRM also is developing a “California Stem Cell Education Initiative” aimed at high schools with the goal of broadly educating California pupils about stem cell science and regenerative medicine and creating pathways for careers in the stem cell industry.~~

~~(m) The biotechnology industry, in response to an ongoing shortage of appropriately educated and trained graduates to meet its workforce requirements, has invested tens of millions of dollars developing and implementing science and math education programs in California. An industry group is releasing a comprehensive directory of these programs as a resource for other schools to implement similar programs.~~

~~(n) In order to ensure that all California pupils have an opportunity for a career in the stem cell and biotechnology industries and that California fully realizes the medical and economic benefits these industries offer, including the benefits made possible by the substantial public investment California has made in stem cell research and facilities, all education policymakers and institutions of public education, and all relevant public agencies and industry organizations, should collaborate and make it a priority to increase stem cell and biotechnology education and workforce development.~~

SEC. 2. Article 13 (commencing with Section 33475) is added to Chapter 3 of Part 20 of Division 2 of Title 2 of the Education Code, to read:

Article 13. The California Stem Cell and Biotechnology
Education and Workforce Development Act of 2009

33475. This article shall be known, and may be cited, as the California Stem Cell and Biotechnology Education and Workforce Development Act of 2009.

33475.1. The purpose of this article is to establish stem cell and biotechnology education and workforce development as a state priority and to promote stronger links among these industry sectors, the California Institute for Regenerative Medicine, and California public schools.

33475.2. For purposes of this article, the following definitions shall apply:

1 (a) “CIRM” means the California Institute for Regenerative
2 Medicine.

3 (b) “Department” means the State Department of Education.

4 33475.3. The department, in consultation with the CIRM and
5 representatives of the biotechnology industry, shall promote stem
6 cell and biotechnology education and workforce development in
7 the department’s existing programs, including, but not limited to,
8 all of the following:

9 (a) The California Health Science Educators Institute.

10 (b) The Health Science Capacity Building Project.

11 (c) The California Partnership Academies, pursuant to Article
12 5 (commencing with Section 54690) of Chapter 9 of Part 29 of
13 Division 4.

14 (d) The regional science resource centers, pursuant to Chapter
15 3.6 (commencing with Section 44770) of Part 25 of Division 3.

16 (e) The California Career Resource Network, including the State
17 Agency Partners Committee.

18 (f) Multiple pathway programs pursuant to Section 52372.5.

19 (g) The K-12 High Speed Network, pursuant to Section 11800,
20 including its academic content platform.

21 33475.4. The department shall post on its Internet Web site,
22 and as appropriate, on the Internet Web site created pursuant to
23 Section 52499.66, information and links to information about the
24 following:

25 (a) Biotechnology education programs, including, but not limited
26 to, those identified by the biotech industry and industry-related
27 organizations.

28 (b) The CIRM education initiatives and related stem cell
29 education and workforce development programs.

30 ~~33475.5. The state board shall incorporate stem cell science~~
31 ~~curriculum content into the science curriculum framework,~~
32 ~~evaluation criteria, and instructional materials at its next revision~~
33 ~~and adoption.~~

34 ~~33475.6. The Regents of the University of California are~~
35 ~~requested to consult with the CIRM and representatives of the~~
36 ~~biotechnology industry in developing curriculum for the California~~
37 ~~State Summer School for Mathematics and Science pursuant to~~
38 ~~Chapter 3.8 (commencing with Section 8660) of Part 6 of Division~~
39 ~~1 of Title 1.~~

1 ~~33475.7. It is requested that the Independent Citizens Oversight~~
2 ~~Committee, when allocating funds for stem cell research and~~
3 ~~facilities pursuant to Chapter 3 (commencing with Section~~
4 ~~125290.10) of Part 5 of Division 106 of the Health and Safety~~
5 ~~Code, consider education and workforce development in addition~~
6 ~~to other criteria, with the goal of furthering the purpose of this~~
7 ~~article.~~

8 33475.5. *The department shall post on its Internet Web site*
9 *links to the CIRM model curriculum on stem cell science and*
10 *communicate to science teachers and school districts the*
11 *availability of this curriculum.*